

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
27 May 2004 (27.05.2004)

PCT

(10) International Publication Number
WO 2004/043731 A1

(51) International Patent Classification⁷: B60N 2/02, 2/06

(21) International Application Number:
PCT/US2003/036301

(22) International Filing Date:
13 November 2003 (13.11.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/425,912 13 November 2002 (13.11.2002) US

(71) Applicant (for all designated States except US): INTIER
AUTOMOTIVE INC. [CA/CA]; 521 Newpark Boulevard,
Newmarket, Ontario L3Y 4X7 (CA).

(72) Inventors; and

(75) Inventors/Applicants (for US only): WEBER, James,
L. [CA/CA]; 5810 Perrytown Drive, West Bloomfield, MI
48322 (US). LAVOIE, Scott, Joseph [US/US]; 1793 110th
Street, Red Oak, IA 51553 (US).

(74) Agents: ASHER, Robin, W. et al.; Clark Hill PLC, 500
Woodward Avenue, Suite 3500, Detroit, MI 48226-3435
(US).

(81) Designated States (national): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC,
SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA,
UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

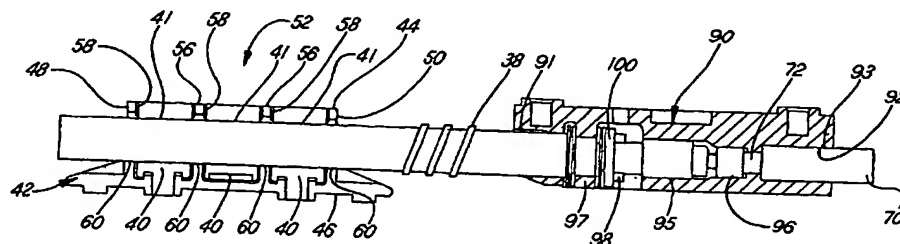
(84) Designated States (regional): ARIPO patent (BW, GH,
GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE,
SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA,
GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: POWER SEAT TRACK HAVING A FLEXIBLE SUPPORT ASSEMBLY FOR A LEAD SCREW



(57) Abstract: A powered track assembly (20) is provided for allowing selective forward and rearward adjustment of a seat assembly (10) along an interior floor of an automotive vehicle. The upper track (24) is fixedly secured to a bottom portion of the seat assembly (10). A rigid shaft (32) having a generally continuous helical thread (38) is rotatably supported by the upper track (24). A plurality of nuts (40) is threadingly engaged with the shaft (32). A cage (42) having a plurality of compartments (58) is fixedly secured to the lower track (22). Each compartment (58) supports one nut (40) to allow relative rotational movement of the rigid shaft (32) relative to the nuts (40). The nuts (40) are allowed a predetermined amount of movement within the respective compartments (58) to prevent binding between the nuts (40) and the rigid shaft (32) due to relative lateral or vertical movement between the upper and lower tracks.

WO 2004/043731 A1